

REMARKS

All of the previously presented claims have now been canceled without prejudice and new claims 31-37 remain pending in this application.

As an initial matter, applicant's attorney would like to thank the Examiner for the courtesies extended by him during the telephone interview on July 1, 2003 in which the invention was discussed along with the prior art references and the most recent Office Action. Based upon the discussions, applicant has presented new claims that are believed to now structurally distinguish over all of the prior art references of record, alone or in permissible combination. It is therefore respectfully submitted that the present claims, taken with the remarks that follow, are now in condition for allowance.

By way of background, applicant's invention provides a unique safety anchor for providing an attachment point to a wall of a building, such as a roof, for attachment of a tether (full restraint) to support at least the full weight of a human. Problems with prior fall restraints or safety anchors are described in the application at paragraphs 4 and 5. For example, prior safety anchors required access to the interior of the building, or drilling of a hole through the roof into a structural member such as a rafter or the need to locate a rafter from the exterior of the roof. These prior devices can create safety hazards and unnecessary risks since timing is critical in an emergency situation where, for example, a firefighter stationed on the roof and fighting a fire needs to immediately "anchor" to the roof of the building to prevent a fall off the roof. The longer it takes to set up the safety anchor and tether, the less time remains to fight the fire.

With this background in mind, the present invention as now claimed provides a structurally unique safety anchor that is not

anticipated nor rendered obvious by the prior art. Accordingly, applicant below addresses the Examiner's rejections in the current Office Action and explains why it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the various prior art references as proposed by the Examiner to arrive at the presently claimed invention.

Claim 20 has been rejected as indefinite under 35 U.S.C. § 112, second paragraph. As this claim has been cancelled, this rejection is now moot. Applicant's newly presented claims, however, are believed to be definite and comply with § 112, second paragraph.

Turning to the first combination of references, the Examiner has rejected former claims 17 and 25-28 as being obvious over *Longley et al.*, U.S. Patent No. 2,911,859 ("Longley") in view of *Tomkinson*, U.S. Patent No. 1,598,407 ("Tomkinson").

As an initial matter, in describing *Longley*, the Examiner contends that *Longley* includes a center shaft having an attachment end 86 inherently capable of being adapted to couple a fall restraint. Applicant respectfully disagrees. As applicant's attorney and the Examiner discussed, *Longley* is directed to inserting a plurality of toggle bolts into a core portion of a lined pipe to prevent the lining of the core portion (that will be removed) from falling into the interior of the pipe. Thus, once the toggle bolts are inserted into the predrilled holes in the pipe, the core and toggle bolts are removed after the core is cut using a circular cutter 17.

As presently claimed in new claim 31, the safety anchor includes a center shaft comprising a tether attachment end including an aperture wherein the tether is coupled to the aperture to provide a fall restraint to a human coupled to the

tether. In *Longley*, not only is there an absence of a tether attachment end including an aperture and a tether coupled to the aperture, but there is a lack of teaching, and lack of motivation for one to attach any type of device or object to the "attachment" end of *Longley*. Thus, one would not be motivated to incorporate an eyelet such as shown in *Tomkinson* since the toggle bolt of *Longley* is only temporarily inserted into the core for providing a brace to prevent solid material 11 from falling into the pipe when the circular core is removed. Because the toggle bolts and core are to be removed in *Longley*, there is no teaching, suggestion or motivation to attach a tether to provide a fall restraint to support the weight of a human coupled to the tether.

The prior art must suggest the desirability of the claimed invention. "In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 U.S.P.Q. 560, 562 (CCPA 1972); M.P.E.P. § 2143.01. Here, the teaching of *Longley* is to use the toggle bolts to temporarily hold the concrete pipe lining in place, which is clearly insufficient to suggest to one of ordinary skill in the relevant art to make the proposed substitution, combination, or other modification of a tether attachment end including an aperture for a tether.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the

art. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992); M.P.E.P. § 2143.01.

Moreover, the fact that the references can be combined or modified is insufficient to establish a *prima facie* case of obviousness. M.P.E.P. § 214.01. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references). Here, the fact that some sort of attachment end could be added to *Longley* is insufficient to establish a *prima facie* case of obviousness for the reasons stated above.

Still further, the fact that the claimed invention might be within the capabilities of one or ordinary skill in the art is insufficient by itself to establish a *prima facie* case of obviousness. M.P.E.P. § 2143.01. Thus, proposed modifications of the prior art to meet the claimed invention, for the reason that it would have been well within the ordinary skill of the art to make the modifications because the references teach that all aspects of the claimed invention were individually known in the art, is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). Again, because one might be able to find individual aspects of the claimed invention in both *Tomkinson* and *Longley* is not enough to support their proposed combination, especially where no motivation to combine is present.

Next, the Examiner notes that *Longley* includes a "piercing end (94) terminating in a point." New claim 31, however, claims that the center shaft comprises a wall piercing end having an upper portion and a lower portion inwardly tapering to a sharp piercing point to facilitate the piercing of the wall piercing end through the wall when the anchor is driven into the wall. In *Longley*, by contrast, the end 94 is described as a pilot member with a conical surface that serves as a guide for entry into the predrilled hole of the pipe (col. 4, lns. 56-59). As described in *Longley*, holes are predrilled into the pipe prior to the use of hollow member 36 for inserting the toggle bolts into the pipe:

The corporation cock and the block 43 may be used to attach a drilling machine by which the hole 38 is drilled through the wall of a pipe containing fluid under pressure. After the hole is drilled, the valve 42 is closed and the drilling machine is replaced by the hollow member 36.

(col. 4, lns. 29-34). Thus, *Longley* (and *Tomkinson*) lack what is now structurally claimed in claim 31, namely, a sharp piercing point to facilitate the piercing of a wall. No motivation exists for providing *Longley* with a sharp piercing point as claimed since the holes are predrilled into the pipe and the act of piercing the pipe could not only damage the pipe but it could do what *Longley* seeks to prevent; namely, cause unwanted inner lining material to fall into the pipe.

The Examiner also contends that *Longley* discloses a collar (95) slideably disposed on a center shaft. As provided in new claim 31, applicant's safety anchor includes a collar movable up and down along the center shaft and having an upper portion proximate to the attachment end and a lower portion proximate to

the piercing end wherein the lower portion proximate to the piercing end has a diameter that is larger than the diameter of the piercing end. In this manner, the collar will rest on the upper surface of the wall even after the wall piercing end of the center shaft pierces through the wall. In other words, the hole created in the wall by the maximum diameter of the wall piercing end is smaller than the diameter of the lower portion of the collar proximate to the wall piercing end.

By contrast, *Longley* discloses an inwardly-tapered rubber stopper 95 to provide sufficient material to partially enter and to completely seal the outer end of the hole 38 (col. 4, lns. 65-70). As such, the stopper of *Longley* does not include a second diameter on its lower portion that is larger than the first diameter of the piercing end. *Longley's* stopper tapers toward and enters the predrilled hole to form a seal in the pipe containing fluid under pressure.

There would be no motivation to modify the *Longley* rubber stopper with a collar such as shown in *Tomkinson* given that the purpose of the rubber stopper is to wedge into the hole to provide a seal to the fluid-carrying pipe. Furthermore, the collar of *Tomkinson* is not meant to help anchor the ground anchor by sandwiching the wall with the wings 20 and 21. In fact, collar 61 of *Tomkinson* is disposed within the wall.

The Examiner correctly notes that *Longley* does not show the shaft having a tensile strength of at least 5000 pounds, nor a locking mechanism coupled to the collar to fix the position of the collar relative to shaft. For these missing elements, the Examiner relies on *Tomkinson* for its showing of a locking mechanism (68, 67) coupled to the collar and biasable against the shaft to fix the position of the collar relative to the shaft. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention

to modify *Longley* to include a shaft having a tensile strength of at least 5000 pounds, and to include the locking mechanism to fix the position of the collar to the shaft because having a shaft with at least 5000 pounds of tensile strength would ensure that the shaft has sufficient strength to withstand against the turning torque, and the locking mechanism would secure the collar to the shaft as taught by *Tomkinson*.

Applicant respectfully disagrees. Again, the mere fact that references could be combined is insufficient to establish obviousness. *In re Mills*, 916 F.2d 680. Here there is no motivation or suggestion in the prior art to provide the shaft of *Longley* with 5000 pounds of tensile strength, or with a tensile sufficient to support the full weight of a human, since nothing is to be attached to the shaft of the toggle bolts as explained above. Once all of the toggle bolts are inserted into the pipe, the large circular core, which carries the toggle bolts, is removed such that the inner lining material does not fall into the pipe.

Further, there is no reason to increase the tensile strength of the shaft of *Longley* to the claimed amounts to "withstand against the turning torque" given that holes are predrilled into the pipe and the only turning torque is to engage the toggle wings to the liner and have the rubber stopper partially enter the hole. Unlike the present invention, the toggle bolts in *Longley* do not need a shaft to support the weight of anything attached thereto, especially not a human anchoring to the shaft to prevent a fall from a rooftop. Thus, there is no motivation to modify *Longley* such that its center shaft can support the weight of a human being, or 5000 pounds, as previously explained.

Further, one of ordinary skill in the art at the time of the invention would not have modified the rubber stopper 95 of

*Longley* to include the locking set screws 68, 67 of *Tomkinson*. These set screws in *Tomkinson* are used to fix the collar to the bolt to provide a stop limit on the upward movement of the crosshead 41 as shown in Figure 3 of *Tomkinson* (see page 2, lns. 81-86).

One would not be motivated to insert set screws into a rubber stopper since doing so might damage the rubber stopper for its intended function of sealing the pipe containing fluid under pressure. It is therefore respectfully submitted that the proposed modification of using the set screws from *Tomkinson* with the rubber stopper of *Longley* is improper, and based on impermissible hindsight, given that there would be no motivation or desire for doing so to one of ordinary skill in the art.

Still further, there would be no motivation, teaching or suggestion to replace the rubber stopper 95 of *Longley* with the complete collar and set screws of *Tomkinson* given that it would not provide the requisite rubber wedge to enter into the pipe to a seal the hole 38 as required in *Longley*.

Going the other way, one of ordinary skill in the art would not have modified *Tomkinson* with the elements of *Longley* to produce the claimed invention. *Tomkinson's* attachment mechanism is completely different than *Longley's* and requires a hole large enough in the beam or wall to accept the entire anchor, including the stop 61. *Tomkinson's* attaching means comprises wings that pierce into the wall as shown in Figure 3 when crosshead 41 is blocked by stop 61. One would not be motivated to substitute *Longley's* toggle bolt wings which would not be able to pierce the wall as required by *Tomkinson*.

In view of the above comments as to why it would not have been obvious to combine the *Longley* and *Tomkinson* references as proposed by the Examiner, and in view of the newly-presented claim 31-37, it is respectfully submitted that the claimed

invention is not rendered obvious by such combination of prior art.

As to former claims 20, 23, 24 and 29 the Examiner had rejected these claims as being obvious over *Longley* in view of *Tomkinson* and *Grimes*, U.S. Patent No. 1,169,635 ("*Grimes*"). *Grimes* had been cited to show a ring disposed on the second end defining a hole spaced from the shaft for attachments thereof. The Examiner concluded that it would have been obvious to combine *Longley* and *Tomkinson*, as noted above, with *Grimes*, noting that having a ring disposed on the second end would enable attachment of other structures to the anchors as taught by *Grimes*. Applicant has shown above that the combination of *Longley* and *Tomkinson* would not render obvious the present invention, and thus, the addition of *Grimes* does not help. Further, it is submitted that the use of the *Grimes* reference to modify *Longley* by providing an attachment ring also goes against the teaching of *Longley*, as explained above, which does not provide any attachment end to the toggle bolts since they will be removed with the center core. See *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 U.S.P.Q. 1593, 1597 (Fed. Cir. 1987) (a prior art reference "must be considered in its entirety, i.e., as a whole, including portions that would lead away from the invention in suit"). Thus, it is likewise respectfully submitted that new claim 31 is not rendered obvious by the combination of *Longley*, *Tomkinson* and *Grimes*.

Previously pending claims 17 and 25-28 were also rejected as being obvious over *Belser*, reissue patent RE 35,358 ("*Belser*") in view of *Tomkinson*. *Belser* discloses a toggle bolt that includes a two-part securing mechanism "to provide a simplified assembly which centers the fastening bolt fastening through the blind bore of the wall, which supports that fastening bolt during tightening down of the wing nut carried

thereby, which provides both radially and axially fastening forces." (Col. 1, lns. 51-55.) Thus, *Belser* provides a slotted tubular bushing 18, which is *insertable into a hole previously provided in the wall*. A tubular expansion insert 20 having an outer periphery which is correspondingly and oppositely flared to the slots in the bushing 18 is carried by the shank of the threaded bolt and received within the bushing. Rotation of the fastening bolt causes the folding wing nut structure to move on the threaded shank to thereby force the expansion insert to move into the tubular bushing and thereby radially expanding the bushing to cause a radial friction locking force.

The Examiner contends that *Belser* includes an attachment end 16a inherently capable of being adapted to couple a fall restraint. Applicant respectfully disagrees given that there is no teaching or suggestion in *Belser* that the toggle bolt would be used for providing a safety anchor to support the weight of a human. Rather, all that is disclosed is that bolt 16 has an enlarged head 16a that includes a transverse slot 16c to receive the blade of a screwdriver. Further, it is disclosed that a load L is provided with a hole or bore 30 and that the bolt assembly provides both axially and radially holding forces for mounting an object L, which is described as a "flat plate" (col. 3, lns. 50-63).

The Examiner also contends that *Belser* includes a "piercing end (16) terminating in a point." Applicant respectfully disagrees, given that bolt 16 is clearly not shown as terminating in a point. Moreover, new claim 31 provides that the center shaft of the claimed safety anchor includes a wall piercing end having an upper portion of a first diameter and a lower portion *inwardly tapering to a sharp piercing point to facilitate the piercing of the wall* when the anchor is driven into the wall. No such sharp piercing point is structurally

provided on the bolt of the *Belser*. By contrast, *Belser* discloses that the plasterboard or other material of wall 12 is first provided with a blind bore 14 of diameter  $D_7$ , which is in excess of the fastening bolt shank diameter  $D_6$  (col. 4, lns. 1-4). Further, the presently claimed invention provides that the first diameter of the wall piercing end is equal to or greater than the distance between the first and second members when in the closed position.

The Examiner notes that *Belser* does not show the shaft having a tensile strength of at least 5000 pounds nor a locking mechanism adapted to couple the collar to the shaft to fix the position of the collar relative to the shaft. Again, the Examiner relies on *Tomkinson* for showing such a locking mechanism. Applicant respectfully submits that no motivation, teaching or suggestion exists for providing *Tomkinson's* locking mechanism, including set screws 68 and 67, to the tubular slotted bushing 18 of *Belser*. Doing so would go against the teaching of *Belser*, which requires that the tubular bushing be inserted into the wall once a hole is provided in the wall, with an open end to receive the corresponding expansion insert 20.

Moreover, providing the locking mechanism set screws 68 and 67 of *Tomkinson* to the tubular bushing of *Belser* would not be feasible given that the bushing will be disposed within the wall and one would not be able to tighten the bushing to the center shaft. Still further, as shown in Figure 3 of *Belser*, the tubular bushing includes slots 32 which extend the full length of the bushing to accept circumferentially spaced radially projecting ribs 21 of tubular expansion insert 20. Providing set screws or other attachment mechanisms to the shaft would therefore interfere with the slots, the ribs or the insert itself from seating in the bushing.

New claim 31 also provides a structure of the collar which includes an upper portion proximate to the attachment end and a lower portion proximate to the piercing end, such that when the locking mechanism locks the collar to the center shaft, the lower portion of the collar is securely held against the outer surface of the wall as shown, for example, in Figure 1 of the present application. This structure distinguishes over the bushing of *Belser* given that the lower portion of the bushing has a smaller diameter than the upper portion of the tubular bushing proximate to the "attachment end." This, of course, is necessary in *Belser* in order for the tubular bushing to be inserted into the bore in the wall. This is avoided by the present invention.

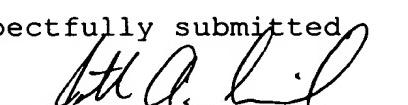
Finally, former claims 20, 23, 24 and 29 were rejected as being obvious over *Belser* in view of *Tomkinson* and *Giannuzzi*, U.S. Patent No. 4,668,144 ("*Giannuzzi*") with *Giannuzzi* being cited to show an attachment member (28) attached to an attachment end to enable the carrying of other objects. *Giannuzzi*, however, merely provides a "nonrotating" toggle bolt assembly that again must be inserted into a hole 26 drilled in a hollow wall (col. 4, ln. 63 - col. 5, ln. 8; Figures 6 and 7). The bolt assembly also includes a load holding fixture 28 (Figures 6 and 7). Providing a hanger element as shown in *Giannuzzi*, however, does not render the present invention obvious given that *Belser* and *Tomkinson* do not render the invention obvious as explained above. Nor does the attachment member of *Giannuzzi* provide a tether attachment end including an aperture to attach a tether to support the weight of a human coupled thereto. Thus, even using the supposed teaching of *Giannuzzi* to modify *Belser* and *Tomkinson* would not render obvious the present invention as described above.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections that he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted

By   
Jonathan A. David  
Registration No.: 36,494  
(908) 654-5000  
Attorneys for Applicant

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